

CLAIMS

What is claimed is:

1. A method for migrating data, said method comprising:
moving a set of data in a data storage system of a computer system;
monitoring a performance of at least one executing application, while said
moving is in progress; and
modifying a rate of said moving in response to said monitoring.

2. The method for migrating data according to claim 1, further
comprising:

setting a performance goal for said at least one executing application, wherein
said rate of said moving is increased in response to said monitoring of said performance
exceeding said performance goal.

3. The method for migrating data according to claim 1, further
comprising:

setting a performance goal for said at least one application, wherein said rate
of said moving is decreased in response to said monitoring of said performance not achieving
said performance goal.

4. The method for migrating data according to claim 1, further
comprising:

inputting an initial placement of said set of data;

inputting a target placement of said set of data;

developing a migration plan, said migration plan configured to plan said
moving of said set of data from said initial placement to said target placement; and
executing said migration plan to implement said moving of said set of data.

5. The method for migrating data according to claim 4, further
comprising:

setting a performance goal for said at least one executing application; and
wherein said monitoring of said performance is conducted at a periodic
sampling interval.

6. The method for migrating data according to claim 5, further
comprising:

modifying said rate after said periodic sampling interval in response to said
performance of said at least one executing application.

7. The method for migrating data according to claim 6, further
comprising:

increasing said rate in response to said performance of said at least one
executing application exceeding said performance goal.

8. The method for migrating data according to claim 6, further
comprising:

decreasing said rate in response to said performance of said at least one
executing application not achieving said performance goal.

9. The method for migrating data according to claim 5, further
comprising:

setting a violation goal, wherein said violation goal is a maximum percentage
of performance violations of all accesses; and

restricting, based on the results of said monitoring, said performance
violations not to exceed said violation goal.

10. The method for migrating data according to claim 1, wherein:
said set of data is moved in increments of portions contained within a logical
volume.

11. A system for migrating data on a computer system, said system comprising:

a monitor configured to monitor a performance of at least one application executing on said computer system;

a controller configured to compare said performance with a performance goal of said at least one application; and

an actuator configured to adjust a rate of movement of a set of data from one location in said computer system to another location in said computer system, wherein said controller is further configured to adjust said rate of movement in response to said comparison of said performance and said performance goal.

12. The system for migrating data on a computer system according to claim 11, further comprising:

a logical volume mover configured to move data in increments of portions contained within a logical volume, wherein said actuator is further configured to issue commands to a manager of said logical volume to adjust said rate of movement of said set of data.

13. The system for migrating data on a computer system according to claim 12, further comprising:

a planner configured to generate a migration plan in response to an input of an initial placement map of said set of data and a target placement map of said set of data, wherein said migration plan is configured to provide a partially ordered set of moves for said set of data and to be executed by said actuator.

14. The system for migrating data on a computer system according to claim 12, wherein:

said actuator is further configured to issue a command to increase said rate of movement of said set of data in response to said controller determining said performance exceeds said performance goal.

15. The system for migrating data on a computer system according to claim 12, wherein:

 said actuator is further configured to issue a command to reduce said rate of movement of said set of data in response to said controller determining performance does not achieve said performance goal.

16. A computer readable storage medium on which is embedded one or more computer programs, said one or more computer programs implementing a method for migrating data on a computer system, said one or more computer programs comprising a set of instructions for:

 moving a set of data in a data storage system of a computer system;
 monitoring a performance of at least one application executing on a computer system; and
 modifying a rate of said moving in response to said monitoring.

17. The computer readable storage medium in according to claim 16, said one or more computer programs further comprising a set of instructions for:

 inputting an initial placement of said set of data;
 inputting a target placement of said set of data;
 developing a migration plan, said migration plan configured to plan said moving of said set of data from said initial placement to said target placement; and
 executing said migration plan to implement said moving of said set of data.

18. The computer readable storage medium in according to claim 17, said one or more computer programs further comprising a set of instructions for:

 setting a performance goal for said at least one executing application, wherein said monitoring of said performance is conducted at a periodic sampling interval.

19. The computer readable storage medium in according to claim 18, said one or more computer programs further comprising a set of instructions for:
setting a violation goal, wherein said violation goal is a maximum percentage of performance violations of all accesses; and
restricting, based on the results of said monitoring, said performance violations not to exceed said violation goal.

20. The computer readable storage medium in according to claim 18, said one or more computer programs further comprising a set of instructions for:
modifying said rate after said periodic sampling interval in response to said performance of said at least one application.